

## Key Takeaways

### Cross-Fertilisation and Collaboration: Livestock and agricultural waste management

The meeting centred on the current state of the bioeconomy in Czech Republic and Poland, emphasising on **livestock and agricultural waste management**:

- Collection, handling, storage, treatment, and land application methods.
- Challenges hindering their exploitation (e.g. security issues, efficiency, transportation, availability, tech or knowledge limitations).
- Lessons learnt and good practices (e.g. nutrient recycling/recovery).
- Value chains

Watch the meeting recording: <https://www.youtube.com/watch?v=Y25p6-ouKv8&t=15s>

#### Are presented operational groups ready to commercialize their results?

Commercialisation is greatly discussed inside the Operational Groups (OGs) (e.g. machinery production), the main issue is transparency: people that want to commercialise the results do not want to join an OG because that would mean open sharing of the findings. However, the fact of the situation is also that farmers are not made successfully aware of the proceedings and the results produced from previous and ongoing, or their own OGs, even though the system is supposed to be formatted around their work. The most probable cause is that the OGs are not fully equipped and aware of how to successfully disseminate the information and results to the farmers beyond the general information and contractual obligations, leading to the key stakeholders being unaware of the proceedings and results in all levels of organisation.

#### Is there a large production of RENURE fertilisers in Poland? What are its prospects for the development of production of this type of fertilisers? Can a farmer easily start such production?

Some of the new types of fertilisers have easier processes of production and can be done at a farm level. Recycled/ Renewed fertilisers have a much more complex manufacturing process, meaning that their production is targeted to bigger enterprises. However, there are many things to be taken into consideration while exploring an alternative fertilising practice, e.g. for manure, an area will need to consider also the balance of manure production to the needs they will need to cover if it is chosen as a main fertiliser. The combination of cost and local availability, along with technological and entrepreneurial availability play a deciding role in the feasibility of the endeavour, making the scheme more ideal for landless farms (only

livestock production) as a waste management solution. There is a need to explore the possibilities of the financial aspect of the business model, to make the farmers both consumers and producers, integrating them in the value chains.

### What are the crucial steps in achieving maximum results from forestry and agricultural waste management?

**Step 1:** Characterisation of materials: set quality parameters so the processes can be standardised and have more uniform results in the utilisation of the valorised biomass, meaning to know the raw material from the start of the process

**Step 2:** Precise monitoring of the procedure and its conditions

**Step 3:** Target specific use/uses for the materials from the beginning and build the process around that aim

Waste management and biomass valorisation through biobased technologies have a great potential to be the cornerstone of actually managing to increase the planet's ability to produce more without the analogous increase of surplus. To reach EU targets we need to stop overusing material and start valorising what has been created so far.

### Which sectors or industries could collaborate effectively in a circular bio-waste management value chain?

Any sector has the potential to be involved. However, the term "waste streams" can have negative connotations to the public, thus it is more fitting to use the term "side streams", since we are referring to valuable materials. Right now, research is more focused on what can be done, but afterwards comes the environmental and economic assessment of the technologies which, after taking into consideration hindering factors like climate change, restrictive policies, and farm/ crop sizes, will determine the feasibility of the large-scale implementation and involvement of different actors and sectors.

### Acknowledgements

- Anna Gołdys – Agricultural Advisory Centre in Brwinów, [Soil-X-Change](#) project
- Piotr Skowron – Institute of Soil Science and Plant Cultivation, [CiNURGi](#) and [FERTITEC](#) projects
- Nicos Larkos – Agrotech Innovations
- Clara Fernando Foncillas – Danish Technological Institute, [Brilian](#) project
- Katerina Panailidou – [BIOEAST HUB CZ](#), [BBioNets](#) project
- Valentina Galantari – [BIOEAST HUB CZ](#), BBioNets FANs contact point
- Magdalena Borzęcka – Institute of Soil Science and Plant Cultivation, [MainstreamBIO](#), [BioRural](#)
- Malgorzata Wydra – Institute of Soil Science and Plant Cultivation, [BBioNets](#) project
- Iakovos Delioglani – [FOCUS STC](#), BBioNets Cross-Fertilisation leader
- Ephy Kouzi – [FOCUS STC](#), BBioNets Collaborations leader
- Dafni Delioglani – [FOCUS STC](#), BBioNets D&C leader

